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SUBJECT—

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PRESENT STATUS OF DOUGLAS-FIR TUSSOCK MOTH

OUTBREAK IN OWYHEE COUNTY, IDAHO

By

L. W. Orr

Forest Insect Laboratory
Ogden, Utah
September 24, 1951

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September 24, 1951

PRESENT STATUS OF DOUGLAS-FIR TUSSOCK MOTH OUTBREAK IN OWYHEE COUNTY, IDAHO

by

L. W. ORR

An outbreak of the Douglas-fir tussock moth, Hemerocampa pseudotsugata, was first reported to this laboratory in August of this year when Mr. J. C. Evenden forwarded excerpts from letters that he had received from Messrs. Vernon H. Burlison, Extension Forester, and H. C. Manis, Entomologist, of the University of Idaho. These letters stated that Mr. J. V. Briggs, County Agent of Owyhee County, had reported severe defoliation of Douglas-fir on South Mountain in 1950 and much more extensive defoliation in 1951.

Mr. R. I. Washburn and Mr. E. H. Davidson, of this laboratory, visited the outbreak area on August 28 in company with Mr. Briggs and several state and county officials, land owners, and spray operators. It was then decided that an aerial survey was needed to determine the areas involved and to get a better appraisal of the feasibility of an aerial spray control program in 1952 if control appeared to be needed. The County agreed to contribute up to $200 for hire of a plane for this survey.

Mr. Briggs made arrangements for the use of a state-owned Cessna 195 plane and for maps and aerial photos of the area. September 13 was set as the date for beginning the survey. Mr. Chet Moulton, State Aeronautics Director piloted the plane and on September 13 and 14 took the following men in flights over the infested areas:

J. V. Briggs, County Agent of Owyhee County
Ted Blackstock, State Senator from Owyhee County
Steele Barnett, Asst. State Forester of Idaho
D. J. Schofield, Forester, Bur. of Land Management
A. D. Craft, Forester, Bur. of Land Management
R. I. Washburn, Entomologist, Bur. of Ent. and Pl. Quar.
L. W. Orr, Entomologist, Bur. of Ent. and Pl. Quar.

Areas showing defoliation were mapped during these flights and were estimated to total between 10,000 and 12,000 acres. Douglas-fir occurs in patches of about 40-year old pole stands between Silver City and Delamar on the north and South Mountain some 20 or 25 miles to the south. The original stands were almost entirely removed during the early mining operations in the area. The present stands have been growing very rapidly and give promise of becoming a valuable source of timber in the not too distant future. Evidence of the value attached to these stands is the great amount of interest shown by local, county, and state people in determining what could be done to prevent further damage by the tussock moth and by their offer to contribute a substantial part of the cost of any necessary control work.

A ground survey of representative areas was made by Mr. Briggs and the writer on September 14 and 15. Areas that were heavily defoliated in 1950, and probably also in 1949, as well as those first defoliated in 1951 or that showed only a trace of feeding, were examined. One area, known as Coyote Creek, where defoliation was first observed in 1949, showed evidence of no feeding in 1951. Areas that were first heavily defoliated in 1950 or 1951 have very little foliage left on the trees and old egg masses and cocoons are very abundant. Close examination, however, failed to disclose any new egg masses (eggs that will produce larvae in 1952). The only new egg masses were found on trees around the borders of defoliated stands, and only 3 or 4 such masses were found.

There was evidence of extremely heavy larval mortality in 1951. Large numbers of dead larvae are present on the ground beneath the defoliated trees. Very few larvae reached maturity in 1951 as shown by the scarcity of what appeared to be new cocoons. What few did mature and spin cocoons were evidently parasitized. We found Dipterous maggots in many of the cocoons.

It was therefore concluded that the tussock moth outbreak in Owyhee County has been controlled by natural factors, disease and parasites, and that there will be no need for control action in 1952. We will, however, plan to make an examination of the area in May next year to make certain that there are no areas where natural control has not yet become effective and where spraying may be needed. The writer feels that there is little possibility of such being the case.

This is an outstanding example of the interest and willingness to cooperate shown by all individuals and agencies concerned in what at first appeared to be the beginning of a sizable project. It is unfortunate that similar action was not taken in 1951 as we could then have prevented much of the damage to this timber. The fact that the trees are young and vigorous may enable many of them to recover in spite of the severe defoliation.

Aerial View Showing Patchy Nature of
Douglas-fir Stands In Owyhee County

Part of One of Several Areas of Heavy Defoliation

Close-ups of Heavily Defoliated Trees
(The dark spots at the ends of branches are cones)